

REMARKS

Claims 1-6 are pending in this application. By this Amendment, claims 1, 2 and 4 are amended for clarity and claims 5 and 6 are added. Support for the amendments to claims 1 and 4 and new claims 5 and 6 can be found at least at paragraphs [0043] and [0051] and Tables 1 and 2 of Applicants' specification. No new matter is added.

Applicants appreciate the courtesies shown to Applicants' representative by Examiner Culbert in the March 25, 2010 telephone interview. Applicants' separate record of the substance of the interview is incorporated into the following remarks.

The Office Action rejects claims 1, 2 and 4 under 35 U.S.C. §103(a) over Applicants' alleged admitted prior art (AAAPA) in view of Watanabe et al. (U.S. Patent No. 5,182,140) and in further view of Higuchi et al. (U.S. Patent No. 4,293,357). The rejection is respectfully traversed.

AAAPA, Watanabe and Higuchi, alone or in any permissible combination, fail to teach and would not have rendered obvious the claimed combinations of features recited in independent claims 1 and 4. AAAPA, Watanabe and Higuchi fail to teach and would not have rendered obvious "wherein the removing of the excess coating slurry is carried out by performing the following steps repeatedly until a porosity of the filter catalyst with pore diameters between 1 μ m to 20 μ m is 12.53% to 13.29% and the porosity of the filter catalyst with pore diameters between 20 μ m to 70 μ m is 27.11% to 28.03%," as recited in independent claims 1 and 4 (emphasis added).

The Office Action acknowledges that the applied references do not teach the above ranges, but asserts that the recited ranges do not produce unexpected results (see page 3 of the Office Action). However, the specification explicitly discloses the unexpected results of the claimed ranges. For example, as shown in Table 2 and Fig. 8 of the present application, Ex. 1 and Ex. 2 exhibit a very small increase (or decrease) in pressure loss, whereas Comp. Ex. 1

and Comp. Ex. 2 exhibit a much larger increase (or decrease) in pressure loss relative to the claimed range. These results are unexpected, significant and not suggested by the references. Therefore, the claimed ranges are not merely an optimization, but are critical to producing unexpected results.

The above references also fail to teach and would not have rendered obvious "maintaining a pressure difference between the first and second opposite ends of the catalyst-support substrate; and maintaining an identical pressure at the first and second opposite ends of the catalyst-support substrate ... the pressure difference having a higher pressure at the first end during a first repetition and a higher pressure at the second end during a second repetition," as recited in independent claim 1; and "maintaining a first pressure difference between the first and second opposite ends of the catalyst-support substrate such that a higher pressure is provided at the first end; maintaining an identical pressure at the first and second opposite ends of the catalyst-support substrate; and maintaining a second pressure difference between the first and second opposite ends of the catalyst-support substrate such that a higher pressure is provided at the second end," as recited in independent claim 4 (emphasis added).

The Office Action asserts that col. 12, line 62 - col. 13, line 5 and Figs. 5 and 6 of Watanabe disclose the above feature (see page 4 of the Office Action). However, these passages of Watanabe merely disclose a unidirectional pressure fluctuation process in which only one pressure difference is applied from one side to the other. Watanabe does not disclose a bidirectional pressure fluctuation method where a pressure difference is applied such that one end of the substrate is at a higher pressure, and subsequently at a lower pressure, as compared to the other end of the substrate. Therefore, Watanabe does not disclose the features of independent claims 1 and 4.

The method of claims 1 and 4 allows for better removal of excess slurry within a catalyst-support substrate having alternately sealed end cells. In particular, excess slurry can

be removed from inside the substrate by pushing air out through the open ends. This method is particularly advantageous for Diesel Particulate Filters (DPF). It would be difficult to remove slurry from the substrate of a DPF with the method disclosed in Watanabe, that is, with only one pressure fluctuation and with only one direction at which this pressure fluctuation is applied.

The Office Action rejects claim 3 under 35 U.S.C. §103(a) over AAAPA in view of Watanabe and Higuchi, and further in view of Nakamura et al. (JP 2002-204958). The rejection is respectfully traversed.

Nakamura does not remedy the deficiencies of AAAPA, Watanabe and Higuchi. Further, claim 3 depends from independent claim 1, which is allowable. Therefore, claim 3 is patentable for at least its dependency on independent claim 1, as well as for the additional features it recites. Applicants thus respectfully request withdrawal of the rejection.

Further, the above-applied references fail to teach the features of new claims 5 and 6.

The process of claims 5 and 6 allows for one end of the substrate to be at atmospheric pressure while the other end is at a pressure lower than atmospheric, thereby creating a vacuum. None of the applied references teaches this feature.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,


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